Boosted by success

Multi-location roll out at Evangelische Stiftung Augusta hospitals in Germany

Customer story

2005 saw a resounding effect in the Radiology and Urology departments of the Evangelische Stiftung Augusta hospitals (ESA), in Bochum, Germany from Philips SpeechMagic. The time saved by using speech recognition to create reports is between 54-98%. Very soon other departments also started using the technology. Today, 120 employees across three geographical sites make use of speech instead of typing. According to Kay Siercks, ESA's IT manager, the goal is to equip every single physician with front-end speech recognition, so that they will be able to prepare findings and medical reports quickly and efficiently.

powered by SpeechMagic™

ESA departments with speech recognition:

- Radiology
- Urology
- Haematology
- Vascular surgery
- Pneumology
- Nephrology
- Geriatrics
- Surgery

It is not easy to get front-end speech recognition across as it means physicians have to prepare documents without the support of a secretary: at the beginning more time is needed. But in a time-distorted process like this, it is important to consider this additional work objectively. After all, requests from the typing pool and colleagues have become superfluous, as has reviewing the report when it gets back from the typing pool. "With front-end speech recognition, everything happens in one step and the doctor has to deal with each report only once." The various hospital analyses show that with front-end speech recognition, the documentation process is being accelerated three to four times.

Immediate success

The three hospitals in Bochum Mitte, Bochum Linden and Hattingen form a highly innovative hospital network. Here, the health card is being tested, one of the most extensive PACS installations with over 60 modalities is being established and the first online portal for referring physicians has been built. In 1990, ESA adopted the digitalization of the writing of findings and medical reports.
Radiology was the first department to introduce speech recognition, but other departments like Cardiology and Endoscopy were also suitable to take it on. In these departments, the dictated findings are short and well-structured, as a result of which the front-end recognition can be trained more efficiently. Because of the high volume of reports, the willingness of doctors to use new systems has increased. "In radiology, the report is the goal", says Siercks.
"Since radiology mainly operates internally, a real-time clinical finding becomes available to the whole hospital at once.
Therefore, this department has become a motivation multiplier; every single physician has started to perceive the advantages of using speech recognition in their own everyday working life.

Integration in the complete system

With the experience acquired, integration in the complete system can be planned perfectly. At ESA, SpeechMagic has been introduced as part of MBS-easy, a system for clinical findings. In turn, MBS-easy interfaces with iSoft RadCenter and SIEMENS Clinicom/Care Center, and the radiology and hospital information systems of ESA. Because of this, the dictation system has been integrated into the leading application as a menu item, patient data is amended automatically and findings are assigned directly. Physicians can decide, as and when required, if they will complete the report themselves with front-end speech recognition or if they will hand it over to a secretary.

"We made the right decision", says Mr. Siercks and shows an MRI examination that took place at 9 am and for which a preliminary written report was available at 9:15 am.

At 10 o'clock, the final report is available in the hospital information system, together with the lab and textual findings – a new experience of speed.

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At the technical pulse of time:
Kay Siercks,
ESA IT manager

Health experts challenge speech recognition

In a comprehensive study, the Baden-Württemberg Foundation, the Centre for European Economic Research (ZEW) and the Fraunhofer Institute for Systems and Innovation Research (ISI) assessed the necessity of a technological offensive in the health sector. The study predicts that speech recognition will assert itself as a cost-cutting and time-saving measure for documentation activities in hospitals – an assumption that is confirmed by the extensive studies of the AKA Bochum. In future, surgeons will also be able to reliably navigate their equipment during operations solely using their voice, freeing their hands for more iportant matters.

Of the 200 participants of the study, 98% indicated that it is desirable to apply speech technology for documentation activities and that it is realizable in the foreseeable future.

Speech recognition is key

"Speech recognition has been supported at the hospital management and administration level", says Kay Siercks. The healthcare system is becoming more and more service oriented: "Ideally, the medical report should be written during the hospital stay, so that the patient can be discharged with complete documentation. In surgery, for example, this is only possible with front-end speech recognition."

The increasing documentation volume has confirmed ESA in their prospective IT planning: between 2000 and 2006, documentation increased by 270%. However, it was not necessary to employ new secretaries. In the Radiology department, it even led to the decrease of two jobs.

Mr. Siercks and his team evaluated over 70,000 documents in order to support their success with figures:

1) In 2006, 40% of reports were finalized after 7 hours. In 2004, this was the case for only 5% of reports.

2) In August 2006, 50% of reports were ready for release by the senior physician after 1 hour and 40 minutes. The key technology is speech recognition.

3) Speech recognition showed dramatic results for CT reports. Within 5 minutes, 80% of the reports were ready and prepared for release.

4) Backend speech recognition accelerated the availability of reports in the Radiology department by 56%, front-end speech recognition by as much as 88%.

"We ourselves are our best publicity because the departments that work with speech recognition are well organized. Because of this, we are starting to feel the pressure to extend the deployment of MBS-easy and SpeechMagic. We have just placed 40 new PCs in the surgical clinic of the EvK Hattingen, so that yet another department will be able to profit from it", says Siercks. "Thanks to speech recognition, we can provide the physicians with even better information, so that they can provide more targeted and faster treatment."

INFO: ODSI certification

MBS-easy powered by SpeechMagic™ is certified for the interface Open Dictation Systems Interface (ODSI). The ODSI certification distinguishes dictation system software, which SIEMENS employees may place at their customers without any restrictions. Thus, hospitals can respond to the various user requirements more flexibly, since all speech processing varieties are supported. This includes digital dictation, backend and front-end speech recognition.

According to circumstances, every user can freely decide which method to use. Kuhlmann-Informations-Systeme GmbH is the only supplier that is certified both for the SIEMENS hospital information system (HIS) CLINICOM CareCenter and for medico//s. Internationally, SpeechMagic is available for SIEMENS customers via direct integration into the syngo Suite and i.s.h.med.

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